IN THE CLAIMS:

20. (Currently Amended) A method for producing a stabilized enzyme emulsion for use with a polarographic or amperometric sensor comprising the steps of:

making an aqueous solution of a protein, either a water soluble enzyme that oxidizes an organic substrate to produce hydrogen peroxide or a carrier protein;

emulsifying a volume of a water immiscible oxygen dissolving substance selected from the group consisting of perfluorocarbons, silicone oils, fluorosilicone oils, aromatic and aliphatic hydrocarbon oils or solids, carotenoids and steroids into the aqueous solution to form an emulsion;

contacting the emulsion with a protein crosslinking agent; and

spreading a mixture of the protein crosslinking agent and the emulsion into a uniform layer whereby the crosslinking agent crosslinks the protein within the emulsion ~~becomes crosslinked~~ to form a solid gel.

21. (Currently Amended) The method of Claim 20, wherein ~~to the emulsion is contacted with a~~ the aqueous solution contains a carrier protein so that when ~~prior to contacting~~ the emulsion is contacted with the protein crosslinking agent the carrier protein becomes crosslinked.

22. (Currently Amended) The method of Claim 21, wherein the aqueous solution contains the water soluble carrier protein and the water soluble enzyme and is added to the emulsion prior to contacting with the protein crosslinking agent.

23. (Cancelled).

24. (Currently Amended) The method of Claim ~~23~~ 20, wherein the oxygen dissolving substance is a perfluorocarbon liquid selected from the group consisting of perfluorooctyl bromide, perfluorodichlorooctane, perfluorodecalin, perfluoroindane, perfluorophenanthrene, perfluorotetramethylcyclohexane, perfluoropolyalkylether oil, perfluoromethyldecalin, perfluorodimethylethylcyclohexane, perfluorodimethyldecalin, perfluorotrimethyldecalin, perfluoroisopropyldecalin, perfluoropentamethyldecalin, perfluorodiisopropyl decalin, perfluorodiethyldecalin, perfluoromethyladamantane, perfluorodimethyladamantane, perfluoro-di-xylethane, and perfluoro-6,7 H-undec-6-ene.

25. (Currently Amended) A method for producing a stabilized enzyme emulsion for use with a polarographic sensor comprising the steps of:

making an aqueous solution of a carrier protein;

emulsifying a volume of a perfluorocarbon liquid into the aqueous solution to form an emulsion;

contacting the emulsion with a water soluble enzyme that oxidizes an organic substrate to produce hydrogen peroxide to form a mixture;

contacting the mixture with a protein crosslinking agent; and

spreading a mixture of the protein crosslinking agent and the emulsion into a uniform layer whereby the crosslinking agent crosslinks at least the carrier protein within the emulsion becomes ~~crosslinked~~ to form a solid gel.

26. (Original) The method of Claim 25, wherein the oxygen dissolving substance is a perfluorocarbon liquid selected from the group consisting of perfluorooctyl bromide, perfluorodichlorooctane, perfluorodecalin, perfluoroindane, perfluorophenanthrene, perfluorotetramethylcyclohexane, perfluoropolyalkylether oil, perfluoro-methyldecalin, perfluorodimethylethylcyclohexane, perfluorodimethyldecalin, perfluorotrimethyldecalin, perfluoroisopropyldecalin, perfluoropentamethyldecalin, perfluorodiisopropyl decalin, perfluorodiethyldecalin, perfluoromethyladamantane, perfluoro-dimethyladamantane, perfluoro-di-xylethane, and perfluoro-6,7 H-undec-6-ene.

27. (New) The method of Claim 25, wherein the step of contacting the emulsion with a water soluble enzyme follows the step of contacting the mixture with a protein crosslinking agent.

28. (New) The method of Claim 25, wherein the protein crosslinking agent is selected from the group consisting of glutaraldehyde, carbodiimide, pyrocarbonate, imidoesters, N-hydroxysuccinimid esters and multifunctional epoxides.

29. (New) The method of Claim 25, wherein the protein crosslinking agent is selected from the group consisting of glutaraldehyde, carbodiimide, pyrocarbonate, imidoesters, N-hydroxysuccinimid esters and multifunctional epoxides.

30. (New) The method of Claim 21, wherein an aqueous solution of water soluble enzyme that oxidizes an organic substrate to produce hydrogen peroxide is added to the emulsion following the step of contacting with the protein crosslinking agent.